Work Order ID 122419

122419

Wednesday, July 30, 2014 4:25:00 PM

Item ID: D4464-041 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Start Qty:** 1.00 *1*

Required Date: 7/15/14 **Req'd Qty:** 1.00 *1*

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** [signature] **Date:** 14-7-30 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D4464	F								
100	Weld per dwg A/R Aluminum rod Batch: 128385	0.00				1	0		14.07.30
100									
Large Fab	**Memo**	0.00							
Large Fab	1- Weld D4023-3 cap as per dwg D4464								
110	QC9- Inspect visual per QSI004- Fusion Welds	0.00				1			QC 14.7.30
110									
QC	**Memo**	0.00							
Quality Control									

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Item ID: D4464-041 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Start Qty:** 1.00 *1*
Required Date: 7/15/14 **Req'd Qty:** 1.00 *1*
Reference:

Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
112		0.00							
112						X			14/07/30 DAS 36
Small Fab	**Memo**	0.00							
Small Fab	1- Install hinge wet with proseal as per dwg A/R Proseal Batch: M128638								
	2- Wet install baffles to front and back panel using rivet and Proseal as per dwg A/R Proseal Batch: M128638								
114	QC5- Inspect part completeness to step on W/O	0.00				1			JB 14-10-9
114									
QC	**Memo**	0.00							
Quality Control									

DQA: _____ Date: _____

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

Item ID: D4464-041 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Start Qty:** 1.00 *1*
Required Date: 7/15/14 **Req'd Qty:** 1.00 *1*
Reference:

Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	Weld per dwg A/R Aluminum rod Batch: M129399 M128956	0.00							
120									
Large Fab	**Memo**	0.00							
Large Fab	1- Weld D4001-1 and D4000-5 onto D4463-1 Top 2- Weld D3999-041/-043 doubler, ensure doubler and angle holes line-up for D4000-047 Transfer drill and c'sink D4975-1 bracket to bottom bracket , wet install as per dwg					1X	14/10/09	DAS 36 9-89	
	Proseal Batch: M128638								
	3- Weld D4000-043 and D4000-045 on tank as per dwg. 4- Instal D4000-9 grommets as per dwg, Weld D4463-3 aft end as per dwg, locate D4000-1 and wet install with rivets as per dwg					1X	14/10/09	DAS 36 9-89	
	Proseal Batch: M128638								
	5-Weld D4463-7 fwd end ***PURGE INSIDE OF TANK*** 6-Weld top D4463-1 using DT9811 and DT9810 ***PURGE INSIDE OF TANK***					1X		DAS 43 9-89	OCT 29 2014

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Item ID: D4464-041 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Fuel Tank Assembly
Start Date: 7/15/14 **Start Qty:** 1.00 *1* **Cust Item ID:**
Required Date: 7/15/14 **Req'd Qty:** 1.00 *1* **Customer:**
Reference:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
123	QC5- Inspect part completeness to step on W/O	0.00				1	NOV 03 2014		
123									
QC	**Memo**	0.00							
Quality Control	***Pressure Test as per dwg D4464***								
140	QC9- Inspect visual per QSI004- Fusion Welds	0.00				1	NOV 03 2014		DAS 24 9-89
140									
QC	**Memo**	0.00							
Quality Control									
150	Chemical Conversion Coat per QSI005 4.1	0.00				1x	of	all	welds
150									
HandFinish	**Memo**	0.00							
Hand Finishing	1- brush alodine on tank. No alodine inside								

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Item ID: D4464-041 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Fuel Tank Assembly
Start Date: 7/15/14 **Start Qty:** 1.00 *1*
Required Date: 7/15/14 **Req'd Qty:** 1.00 *1*
Reference:
Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	DAS
160	QC7-Inspect Chemical Conversion Coat	0.00							14/11/13	36 9-89
160 QC Quality Control	**Memo**	0.00				X			PTO	
161	LEAK TEST TANK IN AREA OF REPAIR.									
164		0.00								DAS 36 9-89
164 Small Fab Small Fab	**Memo** 1- Wipe with clean cloth and wash and wipe 2- Assemble as per dwg and for D4577-041/-3/-5 access panels install wet with proseal 890 A/R Proseal 890 Batch: M128638	0.00				X			14/11/13	
166	QC5- Inspect part completeness to step on W/O	0.00								DAS 38 9-89
166 QC Quality Control	**Memo**	0.00				1				

NOV 14 2014

DQA: [illegible] Date: 14/12/17

QA Closed: [illegible] Date: 14/12/16

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

Work Order update only ☐

Work Order: 122419

Part No. D4464-04/1

NCR No. 14-4460

DISPOSITION

Rework	X
Scrap	
Use-as-is	
Suspected Unapproved	

AGAINST DEPARTMENT/PROCESS

Skid-tube		Crosstube		Water Jet		Engineering	
Machining		Small Fab		Prod. Eng. Coor.		Quality	
Thermoforming		Finishing		Rec/Store/Packaging		Other	
Large Fab	/	Composite		Supplier			

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐ Doc/Data ☐ Equip/Tooling / Handling/Pre ☐ Material ☐ Operator ☐ Offset/Setup ☐ Process ☐ Supplier ☐ Training ☐ Transport ☐ Unapproved ☐	14/11/11			Alodine is too dark Rivets MS20470AD4-8 5x B# M962 MS20470AD 4-7 3x B# 1255 25 LEAK TEST REPAIR AREA	DAS 12 9-89 14/11/12	Remove Alodine and redo Alodine Replace D4000-1 with the shim FILL TANK WITH H2O TO ENSURE NO LEAKS FOUND	Gerry Naughton 14/11/12 Emilie Boucher 14/11/12 14/11/16	PD 14-11-14 Eric	14-11-14 DAS 29 9-89

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- / Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

H:/FORMS/Quality Assurance\approved QA/NCRWO RevH

Item ID: D4464-041 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Fuel Tank Assembly
Start Date: 7/15/14 **Start Qty:** 1.00 *1* **Cust Item ID:**
Required Date: 7/15/14 **Req'd Qty:** 1.00 *1* **Customer:**
Reference:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170		0.00							DAS 41 9-89
170						1			14-11-17
SprayPaint	**Memo**	0.00							
Spray Painting	***MASK PROIOR PRIME AND PAINT***								
	PRIME TEMPO GREY AS PER DWG AND QSI PRIMER BATCH: 128927								
	[redacted] Matte PAINT GREY AS PER DWG AND QSI PAINT BATCH: 127810								
180	QC14- Inspect Spray Paint	0.00							DAS 38 9-89
180						1			NOV 18 2014
QC	**Memo**	0.00							
Quality Control									

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Item ID: D4464-041 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Fuel Tank Assembly
Start Date: 7/15/14 **Start Qty:** 1.00 *1* **Cust Item ID:**
Required Date: 7/15/14 **Req'd Qty:** 1.00 *1* **Customer:**
Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190		0.00							
190						IX			14/11/18 DAS 36 9-89
Small Fab	**Memo**	0.00							
Small Fab	1- Mask off area, where access cover is applied								
	2- Abrade surface with red scotch brite								
	3- Assemble as per dwg								
	4- Install cushion using contact cement								
	A/R Contact Cement Batch: 300C M128871								
	14/11/18								
200	QC5- Inspect part completeness to step on W/O	0.00							
200						D	14-11-17		DAS 9 9-89
QC	**Memo**	0.00							
Quality Control									

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Item ID: D4464-041 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Fuel Tank Assembly
Start Date: 7/15/14 **Start Qty:** 1.00 *1*
Required Date: 7/15/14 **Req'd Qty:** 1.00 *1*
Reference:
Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	Identify as per dwg & Stock Location:_____	0.00	PQD121593		NOV 19 2014		DAS 86 9-89		
210 Packaging	**Memo**	0.00							
Packaging									
220	QC21- Final Inspection - Work Order Release	0.00							
220 QC	Please close w/o +	0.00				MLJ 14-11-19			
Quality Control	Perform QC21 bal-								
	Bring to QA (Eric D)								
	To create link NCR.								
	Thanks.								
	14/11/17								

MLJ 14-11-19

DQA: _____ Date: _____

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

Picklist Print

July-15-14 3:20:30 PM

13

Work Order ID: 122419 *122419*

Parent Item: D4464-041 *D4464-041*

Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14

Start Qty: 1.00 **Required Qty:** 1.00

Comments: IPP REV:A 11.11.23 NEW ISSUE DD VERF:EC IPP REV:B 12.03.08 AS PER DWG REV.B DD VERF:EC IPP REV:C 12.04.24 ECN 12-571 DD VERF:EC IPP REV:D 13.10.30 DWG REV PE1 DD VERF:JLM IPP REV:E 14.06.13 AS PER DWG REV.E DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4968-3		Manufactured	No			190	Each	3.0000	1	1			
D4968-3									**				
Side Cushion													
				Location			**Loc Qty**		**Loc Code**				
				prelim,			3						
					110419		1						
					111321		2						
D3997-5		Manufactured	No			190	Each	61.0000	2	2	14/4/18		DAS 36 9-89
D3997-5									**				
Placard													
				Location			**Loc Qty**		**Loc Code**				
				ST244A			61						
					72611		61			2			
D3997-11		Manufactured	No			190	Each	23.0000	1	1	14/11/18		DAS 36 9-89
D3997-11									**				
Placard													
				Location			**Loc Qty**		**Loc Code**				
				ST244A			23						
					106884		12						
					107679		8						
					99791		3			1			

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐ ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Work Order ID: 122419 *122419*

Parent Item: D4464-041 *D4464-041*

Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14

Start Qty: 1.00 **Required Qty:** 1.00

D3997-17	Manufactured	No		190	Each	20.0000	1	1	DAS 36 9-89
D3997-17							**		14/11/18
Placard									

Location	Loc Qty	Loc Code
ST244A	20	
100181	5	
106785	6	
107632	9	

D3997-29	Manufactured	No		190	Each	12.0000	1	1	DAS 36 9-89
D3997-29							**		14/11/18
Placard									

Location	Loc Qty	Loc Code
ST244A	12	
100182	2	
106864	10	

D3997-43	Manufactured	No		190	Each	23.0000	1	1	DAS 36 9-89
D3997-43							**		14/11/18
Placard									

Location	Loc Qty	Loc Code
ST244A	23	
100183	3	
106642	10	
107558	9	
82960	1	

D3999-7	Manufactured	No		120	Each	15.0000	1	1	DAS 36 9-89
D3999-7							**		14/11/18
Corner									

Location	Loc Qty	Loc Code
WA003	15	
108621	15	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Grimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Picklist Print

July-15-14 3:20:31 PM

Work Order ID: 122419 *122419*

Parent Item: D4464-041 *D4464-041*

Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14

Start Qty: 1.00 **Required Qty:** 1.00

D4000-1	Manufactured	No		120	Each	14.0000	1	**	1

D4000-1

Fuel Supply Fitting

Location	Loc Qty	Loc Code
prelim	4	
120690	4	
WA003	10	
121559	10	

14/10/09 DAS 36 9-89

B122448

~~B122027~~ 1x

D4000-5	Manufactured	No		120	Each	16.0000	1	**	1

D4000-5

Fuel Tank Vent Fitting

Location	Loc Qty	Loc Code
WA003	16	
100528	1	
106917	9	
107388	6	

DAS 43 ~~9-89~~ OCT 29 2014

B121131 → 1x

D4000-9	Manufactured	No		120	Each	48.0000	3	**	3

D4000-9

Grommet

Location	Loc Qty	Loc Code
WA003	48	
105466	10	
106808	38	

DAS 43 9-89

B106808 → 3x OCT 29 2014

3

D4000-045	Manufactured	No		120	Each	6.0000	1	**	1

D4000-045

Fuel Pickup Fitting Assemby

Location	Loc Qty	Loc Code
WA003	6	
106873	2	
107357	4	

14/11/19 DAS 36 9-89

1

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

Work Order ID: 122419 *122419*

Parent Item: D4464-041 *D4464-041*

Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14

Start Qty: 1.00 **Required Qty:** 1.00

D4008-11	Manufactured	No		120	Each	0.0000	1	1		DAS 36 9-89
D4008-11				B121802(1K)**					14/4/18	
Hinge Half										
D4008-041	Manufactured	No		190	Each	11.0000	1	1		DAS 36 9-89
D4008-041						**			14/11/18	
Fuel Filler Splash Guard Assembly										

Location	Loc Qty	Loc Code
ST108	7	
107372	7	
ST242A	4	
106901	4	

D4023-1	Manufactured	No			Each	7.0000		1		
D4023-1						**				
Cap And Flange										

Location	Loc Qty	Loc Code
Mezz	7	
64879	6	
66862	1	

D4023-3	Manufactured	No		190	Each	14.0000	1	1		DAS 36 9-89
D4023-3						**			14/11/18	
Cap And Flange										

Location	Loc Qty	Loc Code
ST143	9	
106700	9	
WA003	5	
120208	5	

~~B122419~~

B120208

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Work Order ID: 122419 *122419*

Parent Item: D4464-041 *D4464-041*

Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14

Start Qty: 1.00 **Required Qty:** 1.00

D4025-5	Manufactured	No		190	Each	14.0000	1	**	1

D4025-5

Fuel Quantity Sender

DAS 36 9-89

14/11/18

Location	Loc Qty	Loc Code
ST232B	14	
106832	10	
107655	4	

D4057-1	Manufactured	No		120	Each	88.0000	3	**	3

D4057-1

Retaining Ring

DAS 43 9-89

B106766 → 3x OCT 29 2014

Location	Loc Qty	Loc Code
WA003	88	
106766	41	
107269	47	

D4062-041	Manufactured	No		190	Each	10.0000	1	**	1

D4062-041

Tank Support Assembly

DAS 43 9-89

OCT 29 2014

B107170 → 1x

Location	Loc Qty	Loc Code
WA003	10	
100076	1	
107170	5	
90627	4	

D4124-1	Manufactured	No		120	Each	24.0000	4	**	4

D4124-1

Tab

DAS 43 9-89

OCT 29 2014

B107333 → 4x

Location	Loc Qty	Loc Code
WA003	24	
106845	4	
107333	20	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Work Order ID: 122419 *122419*

Parent Item: D4464-041 *D4464-041*

Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14

Start Qty: 1.00 **Required Qty:** 1.00

D4125-1	Manufactured	No		120	Each	8.0000	1	1	14-07-28
D4125-1							**		
Sump									

Location	Loc Qty	Loc Code
WA003	8	
106764	3	
107267	1	
110961	2	
99890	2	

D4125-3	Manufactured	No		120	Each	11.0000	1	1	14-07-28
D4125-3							**		
End									

Location	Loc Qty	Loc Code
WA003	11	
106826	3	
111009	2	
114307	4	
99891	2	

D4404-5	Manufactured	No		120	Each	5.0000	2	2	14/11/18 DAS 36 ~~9-89~~
D4404-5							**		
Cushion, Fwd									

Location	Loc Qty	Loc Code
ST145	5	
102143	4	
99743	1	

D4462-1	Manufactured	No		112	Each	4.0000	1	1	14/07/30 DAS 36 ~~9-89~~
D4462-1							**		
Baffle									

Location	Loc Qty	Loc Code
WA	4	
121109	4	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Picklist Print

July-15-14 3:20:31 PM

Work Order ID: 122419 *122419*

Parent Item: D4464-041 *D4464-041*

Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14

Start Qty: 1.00 **Required Qty:** 1.00

D4462-3	Manufactured	No		112	Each	4.0000	1	1		DAS 36 9-89
D4462-3							**		14/07/30	
Baffle										
		Location		**Loc Qty**		**Loc Code**				
		WA		4						
			121158	4						
D4463-041	Manufactured	No		120	Each	2.0000	1	1		DAS 43 9-89
D4463-041							**			OCT 29 2014
Tank Top Assembly									B122884 → 1x	
		Location		**Loc Qty**		**Loc Code**				
		WA003		2						
			120921	2						
D4463-3	Manufactured	No		120	Each	2.0000	1	1		
D4463-3							**		14.08.29	
Tank Aft End										
		Location		**Loc Qty**		**Loc Code**				
		WA003 B123813		2				1		
			120922	2						
D4463-5	Manufactured	No		120	Each	5.0000	1	1		DAS 43 9-89
D4463-5							**			OCT 29 2014
Tank Upper Cut Out									B106451	
		Location		**Loc Qty**		**Loc Code**				
		WA003		5						
			120923	5						
D4463-7	Manufactured	No		120	Each	2.0000	1	1		DAS 43 9-89
D4463-7							**			OCT 29 2014
Tank Fwd End									B121172 → 1x	
		Location		**Loc Qty**		**Loc Code**				
		WA003		2						
			120924	2						

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Work Order ID: 122419 *122419*

Parent Item: D4464-041 *D4464-041*

Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14

Start Qty: 1.00 **Required Qty:** 1.00

D4463-9	Manufactured	No		112	Each	2.0000	1	**	1	14.07.28

D4463-9

Tank Back

Location	Loc Qty	Loc Code	
WA B121175	2		1
120925	2		

D4463-11	Manufactured	No		112	Each	4.0000	1	**	1	14.07.28

D4463-11

Tank Front

Location	Loc Qty	Loc Code	
WA003 B121675	4		1
121168	4		

D4463-13	Manufactured	No		190	Each	3.0000	1	**	1	14.07.28

D4463-13

Tank Bottom

Location	Loc Qty	Loc Code	
WA003 B121165 ~~1~~	3		1
111589	1		
120926	2		

D4577-041	Manufactured	No		190	Each	18.0000	1	**	1	14/07/29 DAS 36 9-89

D4577-041

Fwd Access Panel Assembly

Location	Loc Qty	Loc Code	
ST142	18		
106703	18		1

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Work Order ID: 122419 *122419*

Parent Item: D4464-041 *D4464-041*

Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14

Start Qty: 1.00 **Required Qty:** 1.00

D4577-1	Manufactured	No		190	Each	7.0000	1	1	DAS 36 9-89 14/11/13
D4577-1							**		
Rear Access Panel									

Location		Loc Qty	Loc Code	
ST233		7		
	106923	7		

B121178 (K)

D4577-3	Manufactured	No		190	Each	7.0000	1	1	DAS 36 9-89 14/11/13
D4577-3							**		
Middle Access Panel									

Location		Loc Qty	Loc Code	
ST233A		7		
	106697	6		
	107197	1		

B125140

D4968-1	Manufactured	No		190	Each	10.0000	1	1	DAS 36 9-89 14/11/18
D4968-1							**		
Side Cushion									

Location		Loc Qty	Loc Code	
ST232A		10		
	120927	10		1

D4975-1	Manufactured	No			Each	10.0000		1	
D4975-1							**		B120928 SH 14-11-18
Bracket									

Location		Loc Qty	Loc Code	
st128		10		
	120928	10		

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Work Order ID: 122419 *122419*

Parent Item: D4464-041 *D4464-041*

Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14

Start Qty: 1.00 **Required Qty:** 1.00

AN3C4A Purchased No Each 3,367.000 24

AN3C4A

Bolt

**

14/11/13 DAS 36 9-89

AN3-5A

Location	Loc Qty	Loc Code
FG	20	
122814	20	
ST350	3347	
124221	12	
125388	3	
M127410	1	
M127832	62	
M128606	32	
M128634	8	
M128739	4	
M128879	725	
M129520	2500	

M129507 24x

AN3C5A

AN3-5A Purchased No Each 340.0000 5

AN3-5A

Bolt

**

14/11/18 DAS 36 9-89

Location	Loc Qty	Loc Code
ST350	340	
117423	6	
124561	40	
m126559	92	
m129246	61	
m129507	141	

M125445 5x

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Work Order ID: 122419 *122419*

Parent Item: D4464-041 *D4464-041*

Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14

Start Qty: 1.00 **Required Qty:** 1.00

AN3-6A Purchased No 190 Each 291.0000 4 4 DAS 36 9-89

AN3-6A

Bolt

Location	Loc Qty	Loc Code
ST351	287	
116390	3	
M128739	150	4
M128978	134	
ST511	4	
M127044	4	

MS20426AD4-4 Purchased No Each 2,665.000 4 DAS 36 9-89

MS20426AD4-4

Rivet

Location	Loc Qty	Loc Code
ST313	2665	
125445	2595	4
129090	70	

MS20426AD4-6 Purchased No Each 2,747.000 8

MS20426AD4-6

Rivet

Location	Loc Qty	Loc Code
ST312	2747	
124392	~~860~~	
M128812	1887	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other _____

Work Order ID: 122419
122419
Parent Item: D4464-041
D4464-041
Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14
Start Qty: 1.00 **Required Qty:** 1.00

MS20470AD4-4 Purchased No Each 3,337.000 165
**
MS20470AD4-4
Rivet, Universal Head

Location		Loc Qty	Loc Code
ST312		3337	
	118614	27	
	121652	180	
	M128401	1736	
	M129499	1394	

14/11/13 DAS 36 9-89
M130224 165

MS21042L3 Purchased No 190 Each 5,036.000 4 4
**
MS21042L3
Nut

Location		Loc Qty	Loc Code
ST307		5036	
	123900	955	
	M126333	44	
	M127410	13	
	M127831	41	
	M128401	42	
	M128754	3941	

14/11/15 DAS 36 9-89

NAS1149D0332J Purchased No 190 Each 2,813.000 5 5
**
NAS1149D0332J
Washer

Location		Loc Qty	Loc Code
CA		41	
	m129682	41	
ST276		2772	
	m128606	191	
	m128612	2381	
	m129624	200	

14/11/15 DAS 36 9-89
M130325 5

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other _____

Work Order ID: 122419 *122419*
Parent Item: D4464-041 *D4464-041*
Parent Item Name: Fuel Tank Assembly

Start Date: 7/15/14 **Required Date:** 7/15/14
Start Qty: 1.00 **Required Qty:** 1.00

NAS1149D0363J	Purchased	No	190	Each	2,786.000	32	32

NAS1149D0363J
Washer

**

14/11/13 DAS 36 9-89

Location		Loc Qty	Loc Code
GA		23	
	124392	23	
ST276		8	
	m123441	8	
ST510a		2755	
	m126319	6	
	m128429	2749	

32 ~~32~~

*NAS1149D0316J (1x) M129973

14/11/13 DAS 36 9-89

DAS 12 9-89 14/11/13

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐ ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

ITEM	QTY -041	PART NUMBER	DESCRIPTION	
	X	D4464-041	FUEL TANK ASSEMBLY	
1	2	D3997-5	PLACARD (AUX FUEL DRAIN)	
2	1	D3997-11	PLACARD (LOADING)	
3	1	D3997-17	PLACARD (STOWAGE)	
4	1	D3997-29	PLACARD (WARNING)	
5	1	D3997-43	PLACARD (EARTH)	
6	1	D3999-7	CORNER	
7	1	D4000-1	FUEL SUPPLY FITTING	E
8	1	D4000-5	FUEL TANK VENT FITTING	
9	3	D4000-9	GROMMET	
10	1	D4000-045	FUEL PICK UP AND STRAINER ASSEMBLY	
11	1	D4008-11	TANK HINGE HALF	
12	1	D4008-041	FUEL FILLER SPLASH GUARD ASSEMBLY	
13	1	D4023-1	FUEL CAP FLANGE	
14	1	D4023-3	FUEL CAP	
15	1	D4025-5	FUEL SENDER	
16	3	D4057-1	RETAINER	
17	1	D4062-041	TANK SUPPORT	
18	4	D4124-1	TAB	
19	1	D4125-1	FWD SEDIMENT BOWL	
20	1	D4125-3	AFT SEDIMENT BOWL	
21	2	D4404-5	CUSHION, FWD	E
22	1	D4462-1	BAFFLE	E
23	1	D4462-3	BAFFLE	E
24	1	D4463-041	TOP TANK ASSEMBLY	
25	1	D4463-3	TANK AFT END	E
26	1	D4463-5	TANK UPPER CUT OUT	
27	1	D4463-7	TANK FORWARD END	
28	1	D4463-9	TANK BACK	E
29	1	D4463-11	TANK FRONT	E
30	1	D4463-13	TANK BOTTOM	
31	1	D4577-041	FWD ACCESS PANEL ASSEMBLY	
32	1	D4577-1	REAR ACCESS PANEL	
33	1	D4577-3	MIDDLE ACCESS PANEL	
34	1	D4968-1	CUSHION, SIDE	E
35	1	D4975-1	ANGLE BRACKET	E
36	24	AN3C4A	BOLT	
37	5	AN3-5A	BOLT	E
38	4	AN3-6A	BOLT	E
39	4	MS20426AD4-4	RIVET, SOLID, CSK	E
40	8	MS20426AD4-6	RIVET, SOLID, CSK	E
41	165	MS20470AD4-4	RIVET, SOLID, PAN HEAD	E
42	4	MS21042L3	NUT	
43	5	NAS1149D0332J	WASHER	E
44	32	NAS1149D0363J	WASHER	

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO 12249 MW
14-07-16

RELEASED
2014 -06- 11
MD

REV.	DESCRIPTION	BY	DATE
E	UPDATED -041 WITH RE-DESIGNED D4463-3/-9/-11 AND D4462-1/-3. D4968-1 REPLACES D4404-5 ON TANK SIDE (ZN C3-2) REF NCR 13-3100 AN3-6A REPLACES MS35206-266 (ZN B8-2) NAS1149D0332J REPLACES 5 X NAS1149D0363J (ZN D7-2) REF PAR 12-217 D4975-1 REPLACES D3999-9 (ZN C3-2) REMOVED TAB D3999-11 AND MOVED D3997-43 PLACARD (ZN B6-5) UPDATED BILL OF MATERIALS REVISED ALL NOTES REMOVED SHEET 5	ML	14.05.13
D	ADDED NOTE RE HAND FORMING D4124-1, ZN A8-4.	DC	12.05.02
C	UPDATED -041 WITH RE-DESIGNED D4463-11/-13 REV. C PARTS, ZN B6-2. UPDATED -041 WITH RE-DESIGNED D4577-041/-3/-5 PARTS, ZN C6-2.	DC	12.03.27
B	UPDATED -041 WITH RE-DESIGNED PARTS. REMOVED D4463-13. ADDED D4577-041/-1/-5 ACCESS PANELS, ZN C6-2.	DC	11.12.14
A	NEW ISSUE. REF PAR11-117 & CAR 11-54.	DC	11.10.19

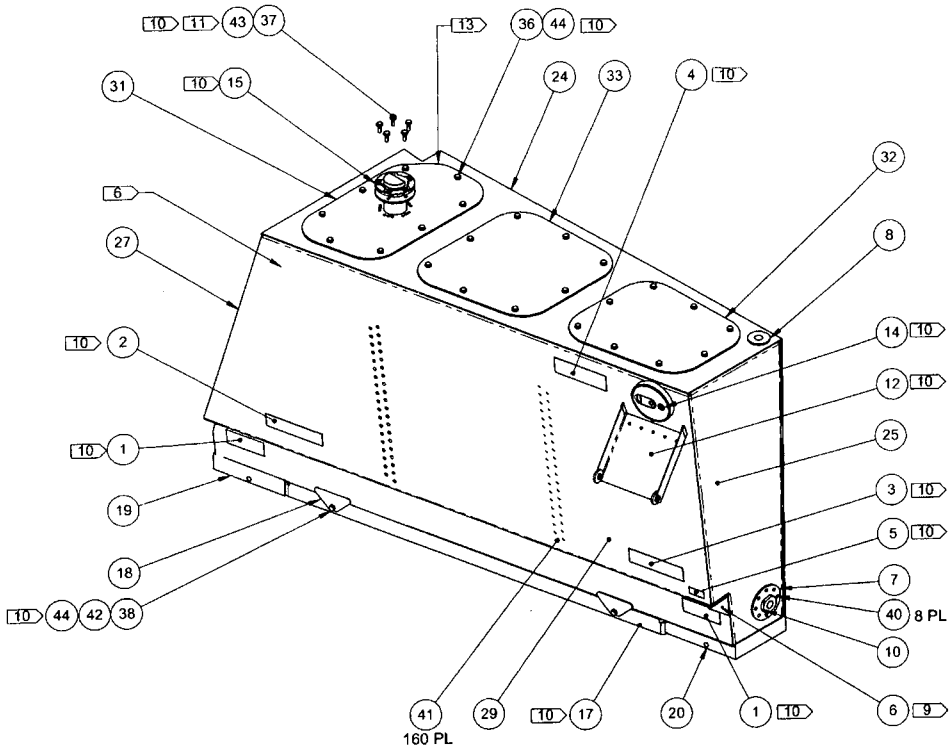
APPROVED

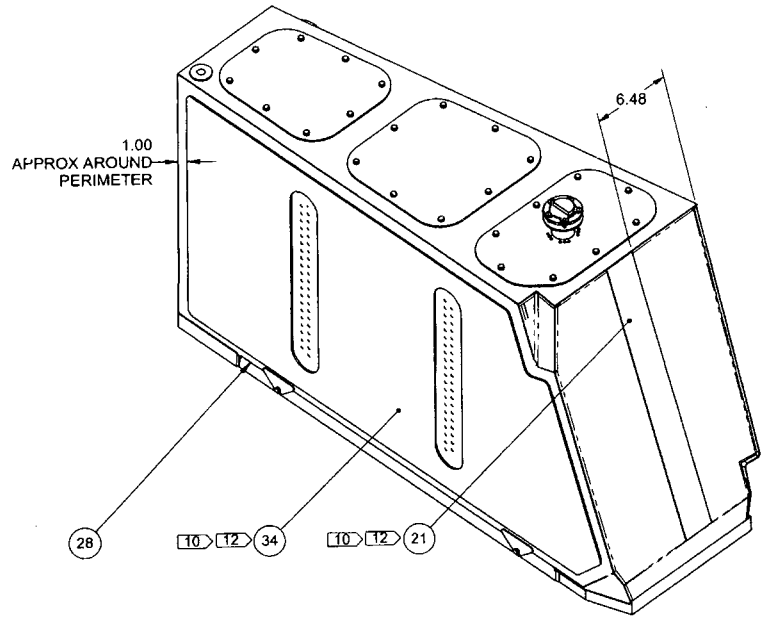
DESIGN	ML
DRAWN	ML
CHECKED	AJS
MFG. APPR.	DD
APPROVED	MP
DE APPR.	DS
DATE	14.05.13

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D4464 REV. E
SHEET 1 OF 4
TITLE TANK ASSEMBLY
SCALE NTS

COPYRIGHT © 2011 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD





⚠E D4464-041 FUEL TANK ASSEMBLY

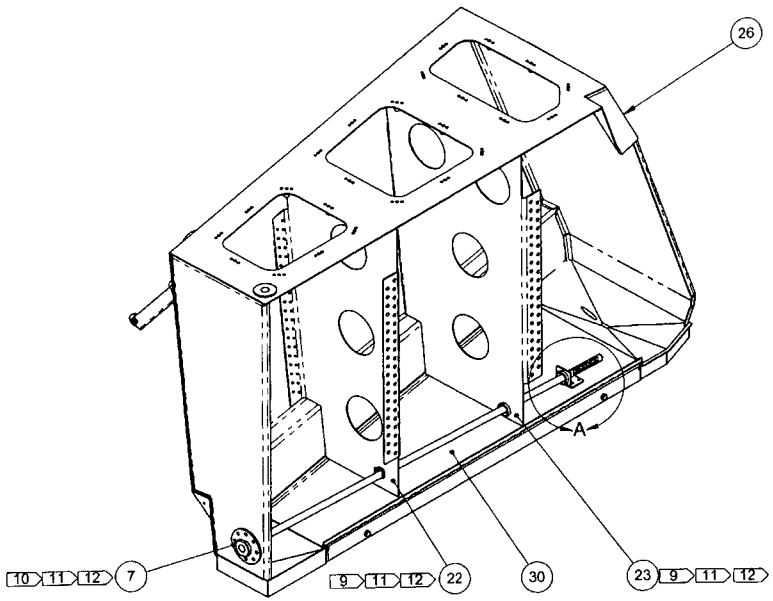
RELEASED
2014 -06- 11

NOTES: ⚠E
1) MATERIAL: N/A
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME TEMPO GREY (4.2.1.3.2) PER DART QSI 005 4.2
PAINT GREY (4.2.2.3) PER DART QSI 005 4.22
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D350-794-141" USING D2729-1 RED DECAL
7) WEIGHT: 39.21 lbs
8) CAP ALL TANK ACCESS POINTS AND PRESSURE TEST TANK PER QSI 038 6.3. VERIFY NO LEAKS
9) MASK PRIOR TO FINISH
10) INSTALL AFTER FINISH
11) LOCKWIRE BOLTS AFTER INSTALLATION PER AC 43.13 OR MS33540
12) INSTALL CUSHION USING CONTACT CEMENT. TRIM TO FIT IF REQUIRED
13) INSTALL D4577-041/-3/-5 ACCESS PANELS WET WITH PROSEAL P/S 890B.

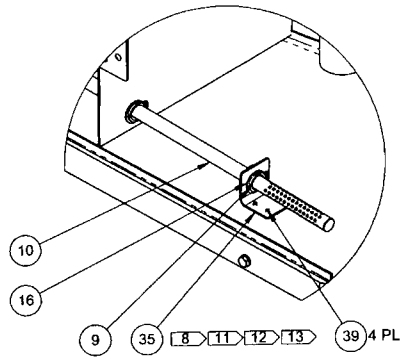
APPROVED

DESIGN	ML	DART AEROSPACE LTD
DRAWN	ML	HAWKESBURY, ONTARIO, CANADA
CHECKED	AJS	DRAWING NO. D4464 REV. E
MFG. APPR.	DD	SHEET 2 OF 4
APPROVED	MP	TITLE TANK ASSEMBLY SCALE NTS
DE APPR.	DS	
DATE	14.05.13	

COPYRIGHT © 2011 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD



D4464-041 FUEL TANK ASSEMBLY (E)
D4463-9 TANK BACK REMOVED
TO SHOW INTERIOR DETAIL



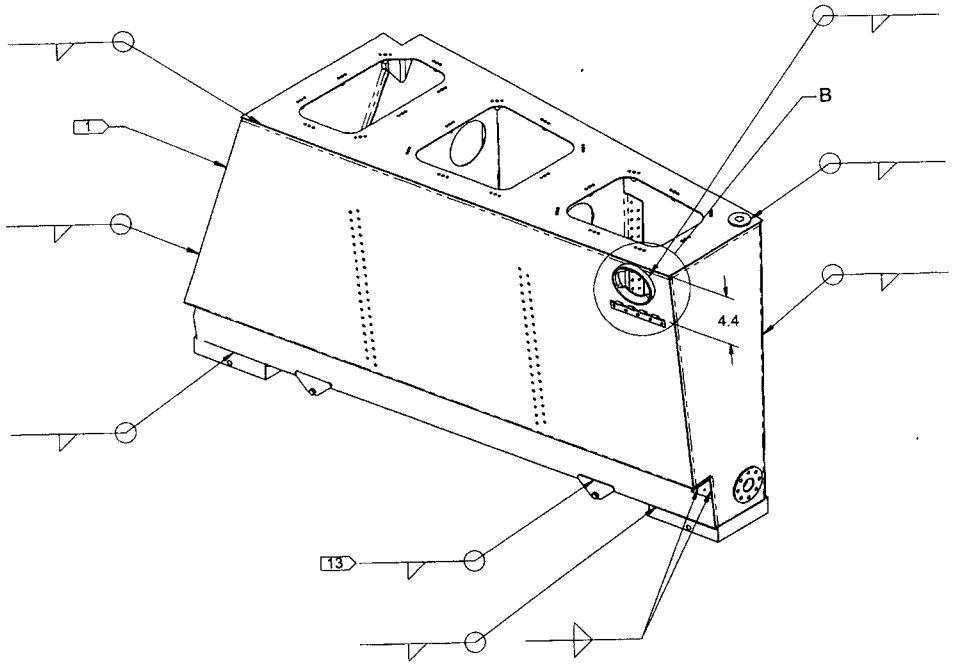
DETAIL A
ROTATED FOR CLARITY
SCALE 2X

NOTES: (E)
1) MATERIAL: N/A
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
6) IDENTIFICATION: N/A
7) WEIGHT: 39.21 lbs
8) COAT FAYING SURFACES OF D4975-1 ANGLE BRACKET AND D4463-13 TANK BOTTOM WITH PROSEAL P/S 890B AND WET INSTALL MS20426AD4-4 RIVETS
9) COAT FAYING SURFACES OF D4462-1/-3 BAFFLES AND D4463-9/-11 TANK FRONT/BACK WITH PROSEAL P/S 890B AND WET INSTALL MS20470AD4-4 RIVETS
10) COAT FAYING SURFACES OF D4000-1 FUEL SUPPLY FITTING AND D4463-3 TANK AFT END WITH PROSEAL P/S 890B AND WET INSTALL MS20426AD4-6 RIVETS
11) FILLET SEAL THE INTERIOR OF THE TANK AROUND THE EDGE OF D4975-1 ANGLE BRACKET, D4462-1/-3 BAFFLES AND D4000-1 FUEL SUPPLY FITTING WITH PROSEAL P/S 890B
12) DOME SEAL ALL BUCKED ENDS OF RIVETS WITH PROSEAL P/S 890B
13) TRANSFER DRILL Ø0.128 HOLES FROM D4975-1 ANGLE BRACKET INTO D4463-13 TANK BOTTOM AND COUNTERSINK HOLES Ø 0.225 X 100° FROM THE OUTSIDE OF THE TANK

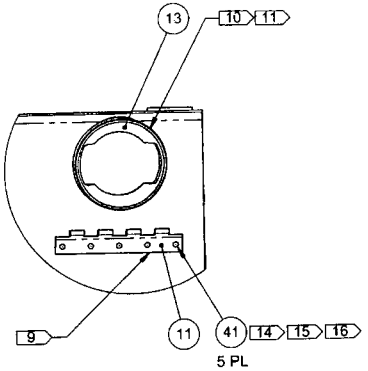
RELEASED
2014 -06- 11

APPROVED			
DESIGN	ML	DART AEROSPACE LTD	
DRAWN	ML	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AJS	DRAWING NO. D4464	REV. E
MFG. APPR.	DD		SHEET 3 OF 4
APPROVED	MP	TITLE TANK ASSEMBLY	SCALE NTS
DE APPR.	DS		
DATE	14.05.13		

COPYRIGHT © 2011 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



D4464-041 FUEL TANK ASSEMBLY
(E) WELDING AND RIVETING DETAIL



DETAIL B
ROTATED FOR CLARITY
SCALE 2X

RELEASED
2014 -06- 1

NOTES: (E)
1) MATERIAL: N/A
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
6) IDENTIFICATION: N/A
7) WEIGHT: N/A
8) TRIM FLANGES AS REQUIRED TO FIT ASSEMBLY
9) CENTER HINGE BELOW FUEL CAP FLANGE
10) POSITION FUEL CAP FLANGE AS SHOWN, ELONGATED HOLE APPROXIMATELY HORIZONTAL
11) POSITION FUEL CAP FLANGE SO THAT INNER FACE IS FLUSH WITH INSIDE OF TANK
12) WELD PER DART QSI 004
13) USE THE D4062-041 TANK SUPPORT ASSEMBLY TO POSITION THE D4124-1 TABS BEFORE WELDING D4124-1 TABS MAY BE HAND FORMED AS REQUIRED TO FIT D4062-041 ASSEMBLY BEFORE WELDING
14) COAT FAYING SURFACES OF D4008-11 TANK HINGE HALF AND D4463-11 TANK FRONT WITH PROSEAL P/S 890B AND WET INSTALL MS20470AD4-4 RIVETS
15) FILLET SEAL THE INTERIOR OF THE TANK AROUND THE EDGE OF THE BAFFLES WITH PROSEAL P/S 890B
16) DOME SEAL ALL BUCKED ENDS OF RIVETS WITH PROSEAL P/S 890B

APPROVED

DESIGN	ML	DART AEROSPACE LTD
DRAWN	ML	HAWKESBURY, ONTARIO, CANADA
CHECKED	AJS	DRAWING NO. D4464 REV. E
MFG. APPR.	DD	SHEET 4 OF 4
APPROVED	MP	TITLE TANK ASSEMBLY SCALE NTS
DE APPR.	DG	
DATE	14.05.13	

COPYRIGHT © 2011 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D350-794 REV. F OR EARLIER AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D350-794 REV. 6 OR EARLIER

REF. TCCA STC:SH05-4
REF. EASA STC: 10031514
REF. BRAZIL STC: 2002S09-07/-08
REF. AUSTRALIAN STC: ASR063SY
REF. FAA STC: SR02794NY

PURPOSE:

TO PROVIDE INSTRUCTIONS THAT ALLOW INSTALLATION OF D4968-3 NEOPRENE CUSHION TO PREVENT THE D4464-041 AUX. FUEL TANK FROM CHAFING IN SERVICE.

CHANGE:

CUSTOMERS/OPERATORS WITH D350-794-111 KITS AT CHG 003 AND EARLIER, D350-794-141 AT CHG 001, AND D130-794-121 AT CHANGE 003 AND EARLIER CAN PROCURE DSI-9672-011 KIT FROM DART TO UPGRADE THEIR KITS WITH THE NEOPRENE CUSHION.

PARTS LIST:

QTY -011	PART NUMBER	DESCRIPTION
X	DSI-9672-011	CUSHION INSTALLATION
1	D4988-3	CUSHION, SIDE

INSTALLATION:

REMOVE THE D4404-3/-5 CUSHIONS AS INDICATED IN FIGURE 1 OF THIS SERVICE INSTRUCTION, CLEAN RESIDUAL ADHESIVE OFF OF TANK SURFACE USING AN APPROVED SOLVENT SUCH AS TOLUENE.
INSTALL THE D4968-3 CUSHION IN ACCORDANCE WITH FIGURE 1 OF THIS SERVICE INSTRUCTION. APPLY A THIN, UNIFORM LAYER OF CONTACT CEMENT (3M 1300/1301 SCOTCHGRIP ADHESIVE OR EQUIVALENT) TO THE BACK OF THE NEOPRENE CUSHION, THEN FIRMLY PRESS IT INTO POSITION ON THE TANK.
NOTE: TRIM TO FIT IF REQUIRED.

WEIGHT AND BALANCE:

THE FOLLOWING TABLE LISTS THE NEW WEIGHT AND BALANCE OF THE -111/-121 KITS AFTER DSI-9672-011 KIT HAS BEEN INSTALLED.

		LATERAL		LONGITUDINAL	
INSTALLATION	WEIGHT	ARM	MOMENT	ARM	MOMENT
D350-794-111 AUXILIARY FUEL TANK (WITH DSI 9672 INCORPORATED) (AS350 MODELS)	34.2 lb 15.5 kg	-22.0 in -0.56 m	-752.4 in-lb -8.7 m-kg	126.0 in 3.20 m	4309.2 in-lb 49.6 m-kg
D130-794-121 AUXILIARY FUEL TANK (WITH DSI 9672 INCORPORATED) (EC130 MODELS)	34.2 lb 15.5 kg	-23.6 in -0.60 m	-807.1 in-lb -9.3 m-kg	126.0 in 3.20 m	4309.2 in-lb 49.6 m-kg

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

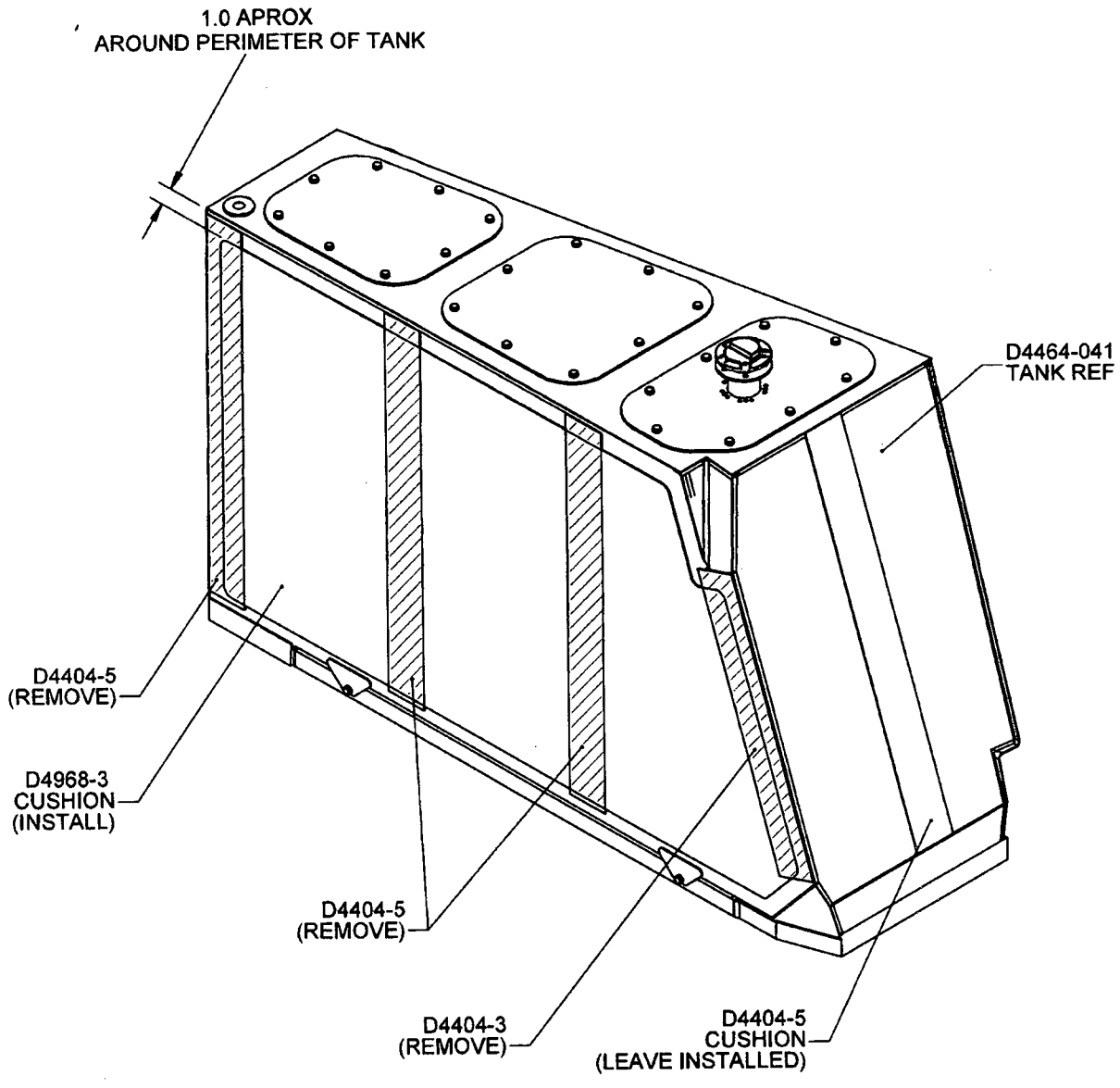
BY: _____
D. SHEPHERD (DE # 02)

DATE: 13.11.05
CERT. NO.: SH05-4
ISSUE NO.: 3

REV.	DESCRIPTION	BY	DATE
A	NEW ISSUE	ML	13.11.04

DESIGN	ML	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	ML	
CHECKED		DRAWING NO. DSI 9672 REV. A SHEET 1 OF 2
MFG. APPR.	N/A	
APPROVED		TITLE CUSHION INSTALLATION SCALE NTS
DE APPR.		
DATE	13.11.04	

COPYRIGHT © 2013 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



NOTE: ALIGN D4968-3 WITH APROXIMATELY 1.0" GAP AROUND EDGE OF TANK. TRIM IF REQUIRED

FIGURE 1 - CUSHION INSTALLATION

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: _____
D. SHEPHERD (DE # 02)

DATE: 13.11.05
CERT. NO.: SH05-4
ISSUE NO.: 3

DESIGN	ML
DRAWN	ML
CHECKED	
MFG. APPR.	N/A
APPROVED	
DE APPR.	
DATE	13.11.04

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. DSI 9672 REV. A
SHEET 2 OF 2

TITLE CUSHION INSTALLATION
SCALE NTS

COPYRIGHT © 2013 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DAA: [signature] Date: 14/12/17

QA Closed: [signature] Date: 14/12/16

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

Work Order update only ☐

Work Order: 122419

Part No. D 4464-041

NCR No. 14-4467

DISPOSITION

Rework	X
Scrap	
Use-as-is	
Suspected Unapproved	

AGAINST DEPARTMENT/PROCESS

Skid-tube		Crosstube		Water Jet		Engineering	
Machining		Small Fab		Prod. Eng. Coor.		Quality	
Thermoforming		Finishing		Rec/Store/Packaging		Other	
Large Fab		Composite		Supplier			

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design		14/11/12		1	D4000-045 will not screw in. Design problem D4000-1 should be angled to match orientation of D4000-045. One hole in baffle does not align w/ D4000-045 inducing a bend.	DAS 12 9-89	Install angled shim to orient D4000-1 at 2.8° (6061-T6 B/N 10/694)	14/11/12 DAS 36 9-89	PD 14-11-14	
Doc/Data						14/11/12	Remove plastic grommet and open 1/8 hole in baffle as req'd to clear D4000-045.	GC 14/11/12		
Equip/Tooling							Touch up alodine	[signature]		
Handling/Pre							Ensure tank is fully clean. No chips inside tank.	[signature] 14/11/12		
Material										
Operator										
Offset/Setup										
Process										
Supplier										
Training										
Transport										
Unapproved										

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other